Supplementary Table 1. Demographic data of the resting fMRI dataset (N=905) collected in Taipei Veterans general hospital

| Characteristic, mean (SD) | SZ  n=210 | BD-I  n=133 | BD-II  n=105 | MDD  n=194 | HC  n=263 |
| --- | --- | --- | --- | --- | --- |
| Male/female, No. | 123/87 | 59/74 | 31/74 | 59/135 | 119/144 |
| Age, y | 34.4 (9.1) | 38.2 (12.0) | 37.4 (12.4) | 37.8 (15.0) | 30.4 (11.3) |
| Education level, y | 13.4 (2.7) | 13.7 (3.0) | 14.1 (2.9) | 12.8 (3.6) | 14.2 (3.1) |

SZ=schizophrenic disorder; BD-I= bipolar I disorder; BD-II=bipolar II disorder; MDD=major depressive disorder; HC=healthy control.

Supplementary Table 2. The numbers of contaminated volumes (frame-wise displacement>0.2 mm) of functional scans in different patients’ groups and healthy.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | SZ | BD-I | BD-II | MDD | HC |  |  |
|  | n=100 | n=100 | n=100 | n=100 | n=100 | F | p |
| Contaminated  volumes | 6.41±16.31 | 9.76±16.71 | 8.69±15.29 | 6.27±13.59 | 6.38±12.05 | 1.18 | 0.32 |

Supplementary Table 3. The results of the conjunction analysis in control analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Structures | MNI coordinates (mm) | | | Cluster size |
|  | x | y | z | Voxels |
| L. Cerebellar Crus II | -24 | -62 | -40 | 25 |
| L. Thalamus | -8 | -14 | -8 | 19 |
| R. Postcentral Gyrus | 56 | -22 | 40 | 17 |
| L. Postcentral Gyrus | -40 | -22 | 32 | 15 |
| L. Lateral Occipital Cortex | -40 | -62 | 32 | 8 |
| R. Lateral Occipital Cortex | 48 | -78 | -8 | 7 |
| R. Central Opercular Cortex | 68 | -6 | 0 | 6 |
| R. Postcentral Gyrus | 16 | -46 | 64 | 5 |
| R. Frontal Pole | 40 | 26 | 24 | 5 |
| R. Occipital Pole | 16 | -102 | 0 | 5 |
| L. Cerebellar Crus II | -16 | -84 | -48 | 2 |
| R. Supramarginal Gyrus | 64 | -46 | 32 | 2 |
| R. Cerebellar Crus I | 40 | -62 | -40 | 2 |
| L. Superior Temporal Gyrus | -48 | -14 | -8 | 2 |
| R. Cingulate Gyrus, posterior division | 8 | -30 | 24 | 2 |
| R. Temporal Fusiform Cortex | 42 | -38 | -32 | 2 |
| R. Superior Temporal Gyrus | 70 | -30 | 0 | 2 |
| L. Lateral Occipital Cortex | -40 | -70 | 8 | 1 |
| R. Supramarginal Gyrus | 56 | -46 | 8 | 1 |
| L. Precentral Gyrus | -24 | -14 | 64 | 1 |
| R. Superior Temporal Gyrus | 56 | -6 | -8 | 1 |
| R. Precuneous Cortex | 16 | -70 | 32 | 1 |
| L. Hippocampus | -24 | -22 | -16 | 1 |
| L. Parahippocampal Gyrus | -16 | -6 | -32 | 1 |
| R. Parahippocampal Gyrus | 32 | -14 | -32 | 1 |
| L. Postcentral Gyrus | -24 | -30 | 48 | 1 |
| L. Cerebellar VIIIb | -16 | -46 | -56 | 1 |